

SPECIFICATIONS

**ATCT / TRACON Security Upgrades
Florence, South Carolina**

**FLORENCE AIRPORT
FLORENCE, SOUTH CAROLINA**

FINAL

Prepared by:



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SECTION 01110
SUMMARY OF WORK

PART 1 - GENERAL

- 1.1 **Section Includes:** These Specifications, together with referenced specifications, standards and drawings specified in the Contract Documents, cover the Subcontract requirements of the Federal Aviation Administration (FAA) for the Work.
- 1.2 **Related Sections:** Drawings and General Conditions of the Contract, including General and Supplementary Conditions, other Division 1 through Division 16, if required, Specification Sections, and any attachments to this Subcontract apply to this section and to the Subcontractor's performance of the Work.
- 1.3 **Definitions, Acronyms, Abbreviations, and References:**
- A. See General Conditions Article 1 for other definitions relevant to these specifications.
- B. In the Contract Drawings, the term "Contractor" shall mean the Subcontractor performing the work on the project.

GFE/GFP: Government Furnished Equipment/Property.

NTP: Notice to Proceed.

Quality: Conformance to the requirements established by the contract specifications and drawing.

Record Documents: Drawings, Specifications, Addenda, Change Orders and other Modifications; also approved Shop Drawings, Product Data, Samples, and similar submittals required to be provided by Subcontractor.

Record Drawings: Drawings submitted by Subcontractor to show the construction of a particular structure or Work as actually completed under the Subcontract.

Request for Information (RFI): The method used by the Subcontractor and Contractor to document and transmit field generated technical issues relating to design and construction of the Project.

Shop Drawings: Specific drawings, schedules, diagrams, and other data prepared for this Subcontract by the Subcontractor, their lower tier subcontractors, manufacturers, suppliers, or distributors, to illustrate a portion of the Work.

Submittal: A submittal is a Subcontractor's or manufacturer's drawing, brochure, sample, certificate, warranty, or other material which provides detail for construction and quality control of the permanent Work and includes deliverables such as schedules, product cut sheets, Work procedures, or product samples that are required under the terms of the Subcontract.

Test Plan: A detailed step-by-step procedure for testing major equipment and systems.

Test Results: Documentation of specified quality assurance test results.

Resident Engineer (RE)/COR: On site Resident Engineer assigned to monitor the progress of the subcontract.

1.4 **Summary of Work:**

- A. **General:** This specification, along with related documents specified in Paragraph 1.1, covers the requirements for all work associated with the establishment of ATCT security upgrades and preparation for the installation of a prefabricated guard booth installed by others. The subcontractor shall comply with all procedures, rules and regulations in effect at the airport. Additional labor, materials, equipment, and/or appurtenances not specifically detailed or specified, but required to complete the project, shall be provided by the Subcontractor as an integral part of the scope of work specified.
- B. **Major Items of Work:** The following items are a brief summary of the project and are provided solely for the purpose of revealing the general nature of the work involved. The Subcontractor is responsible for accomplishing all items of work in accordance with the applicable drawings, specifications and provisions of the subcontract. Any additional labor, materials, equipment, and/or appurtenances not specifically detailed or specified, but required to complete the project, shall be provided by the Subcontractor as an integral part of the scope of work specified. This information should not be used solely as a basis for Subcontractor's proposal.

ANI330 will install a FAA Standard Security fence with an automated gate and Gate Control Video (GVC) with remote release. The fence will be 7ft with 1ft (three strands) of barb wire. The fence route will correlate with the perimeter of the lease area, and will have openings for both the vehicle and pedestrian gates. This requires approximately 560 linear feet of chain link fence and an extension to the current leased area (see Site Layout below). A 25' gate with a Hy Security operator will be installed at the entrance of the facility parking lot. A gate pocket will be created on the east side of the entrance in the now grassy area. The operator requires 208, 3 phase power and will be powered from 3 spares of the panel located in the base building. A pedestal will be installed approximately 12' from the gate with an Aiphone for visitor identification and keypad for employee access into the facility. During the survey, the AT Manager asked that an Aiphone also be installed at the door to the base building which would tie into the GVC. A 20' light pole will be installed outside the fence to ensure the visual identification of visitors to the facility.

- 1.6 **Pre-Construction Meeting:** The Project engineer will schedule a pre-construction meeting after Notice of Award. Required attendance includes Subcontractor; Subcontractor's Superintendent, major lower tier subcontractors and designated Tower personnel. An agenda will be provided but shall include at a minimum the review of the scope of the task, time of performance, work schedule and other Tower issues. Acknowledgements of all the reviews made at the session shall be noted in the meeting minutes.
- 1.7 **Access Requirements and Use:**
- A. Access to the Worksite shall be with approval of the RE. Access to the Worksite shall be thoroughly discussed prior to the start of actual construction. Only vehicles essential to the construction effort shall be permitted in the construction area. All construction equipment and materials shall be moved away from the runway and taxiway at the end of each workday as directed by the RE.
 - B. Access to certain locations for the project may be restricted due to facility operations. Subcontractor may be required at various times to yield to facility operations that may require use of the Site. Upon receiving such a notice, Subcontractor shall vacate the subject area. Unless otherwise indicated, Subcontractor shall have complete and exclusive use of the premises within the construction staging area limits for the execution of the Work.
- 1.8 **Subcontractor and Government Furnished Property:**
- A. These Specifications identify labor, materials, plant and equipment to perform the Work. All material not specifically indicated as furnished by the RE indicated on Attachment B shall be furnished by Subcontractor.
 - B. Government Furnished Equipment/Government Furnished Property. The Subcontractor shall be accountable for all GFE/GFP or equipment/property acquired under this Subcontract. The Subcontractor shall not accept any GFE/GFP without documentation signed by both the Subcontractor and RE indicating actual items and quantities received/transferred. GFE/GFP furnished but not installed will be returned to the Contractor with documentation signed by both the Subcontractor and the RE indicating actual items and quantities received/transferred. The Subcontractor shall adequately control, preserve, protect and maintain all GFE/GFP and subcontractor acquired property. GFE/GFP includes the following: see Attachment B
- 1.9 **Compliance with Local and Other Codes:** The Subcontractor shall be responsible for coordination of all work at the Worksite, and for obtaining local permits. The Subcontractor shall obtain and comply with any necessary licenses/permits that comply with applicable Federal, State, and Municipal regulations in connection with the scope of the work. The FAA shall not be required to pay any amount for any action taken by a state or political subdivision.
- 1.10 **FAA Right of Access:** The FAA reserves the right to enter the premises during the term of the Subcontract for quality assurance work inspections and/or maintenance of existing navigational and communication facilities.
- 1.11 **Site Inspection:** After NTP and prior to initiating Work, Subcontractor and RE shall conduct joint inspections of the jobsite to determine the existing conditions and note any existing damage or defects. Existing damage or defects will be used as the basis for determination of damages caused by the Subcontractor's operations.

- 1.12 **Site Damage:** Subcontractor shall be responsible for the cost of any repair caused by Subcontractor's operations or the operations of its subcontractors. All damage to the existing Site including, but not limited to, existing utilities and cables, facilities, equipment, buildings, and vegetation shall be repaired. All such repairs shall match the original finish and shall be made utilizing materials, equal to or greater than the original materials, as approved by RE. All repairs shall be made with no additional cost to the RE.

PART 2 - PRODUCTS [NOT USED]

PART 3 - EXECUTION

3.1 **Special Scheduling Requirements:**

- A. Protect existing facilities and equipment from physical or electrical damage as a result of accidental or incidental negligence, such as, but not limited to, disruption of standby power to the facility or equipment.
- B. Contractor will make every attempt to minimize downtime of fence and old guard booth.
- C. All preparatory work shall be completed by the Subcontractor prior to shutdown/cutover to minimize downtime. The requested time and date of shutdown and cutover shall be approved by the RE a minimum of two working days in advance of the requested shutdown or cutover. FAA personnel will perform the actual shutdown/cutover of systems that affect operations.
- D. In the event any services are interrupted, restore services with a full crew available to restore such services on a 24-hour basis, including Work during holidays and weekends, at no additional cost to Contractor or delay in the Schedule.
- E. Request any utility interruptions in writing five (5) days before the scheduled interruption, unless otherwise specified. RE review is required before interruption. In this notification, the Subcontractor shall certify that all equipment, materials, and personnel necessary to conduct such testing will be available on the scheduled date and that the systems have been pre-checked by personnel and are ready for performance and acceptance testing.
- F. Subcontractor shall also confirm that all operations and maintenance manuals have been submitted and approved. No performance and acceptance testing will be permitted until the operations and maintenance manuals have been approved.
- G. At the option of the RE, the RE and FAA personnel will travel to the site to witness testing. If the testing must be postponed or canceled for whatever reason not the fault of the RE, the Subcontractor shall provide the RE not less than three (3) working days advance notice (notice may be facsimile) of this postponement or cancellation.
- H. Coordinate all required outages with the RE. The Subcontractor shall determine quantity and duration of outages required to complete the Work. The Subcontractor may have to schedule work and outages at a time when air traffic is at a minimum. This could mean late night or early morning hours.
- I. Do not interrupt services outside of permitted, scheduled outage periods.

3.2 **Inspection of Work:**

- A. RE retains the right to inspect all Work on the project. The inspections or tests are for the sole benefit of the FAA. The Contractor is not:
 - 1. Relieve the Subcontractor or its lower tier subcontractors of the responsibility to provide adequate quality control measures.
 - 2. Relieve the Subcontractor or its lower tier contractors of the responsibility for damage to or loss of material before acceptance.
 - 3. Constitute or imply acceptance.
 - B. The presence or absence of the RE does not relieve the Subcontractor or its lower tier contractors from any Subcontract requirement, nor is the RE authorized to change any requirement of the Subcontract.
- 3.3 **Submittals:** Document, data, and/or material submittals shall be in accordance with Section 01330, Submittal Procedures, and/or as specified elsewhere in the Technical Specifications.
- 3.4 **Contract Closeout:** The Subcontractor is responsible for Subcontract closeout in accordance with Section 01770, Closeout Procedures.

END OF SECTION

SECTION 01450
QUALITY CONTROL

PART 1 - GENERAL

1.1 Section Includes: This section specifies requirements for quality control of the work including, but not limited to, certificates of compliance, inspections and testing by the Subcontractor, and surveillance by the RE.

1.2 Related Sections:

General Conditions	Article 7, Quality Assurance
Section 01110	Summary
Section 01320	Construction Schedules and Reports
Section 01330	Submittals
Section 01770	Closeout Procedures.

1.3 Subcontractor's Quality Control Plan (QCP):

- A.** The Subcontractor's QCP shall address the 4-step inspection process that includes preparatory inspections, initial inspections, follow-up inspections, and final inspections, if testing is required.
- B.** Subcontractor's QCP shall identify Subcontract quality requirements for each activity and describe how Subcontractor intends to furnish control testing, certifications, and records in order to provide quality Work. The QCP shall include procedures so equipment, workmanship, fabrication, construction, operations, and inspections comply with the Contract Documents. Minimum QCP requirements are as follows:
1. Name, resume, authority, and responsibility of QC Representative who will monitor the quality of construction activities.
 2. List of definable features of work that have distinct and separate control requirements.
 3. List of outside organizations including testing laboratories, architects, or consulting engineers that will be employed by the Subcontractor. Include a description of services to be provided.
 4. Subcontractor's procedure for scheduling, managing, and reviewing all shop drawings, samples, certificates and/or other submittals for contract compliance.
 5. A matrix of the technical sections of the specification showing responsibility for inspecting the Work, what testing laboratory or person will perform on site testing, and who will perform required factory inspections and testing.
 6. An inspection and test plan keyed to the construction schedule, following the order of the specification technical sections, indicating what inspections and tests will be performed, the names of persons responsible for the inspection and testing of each segment of work, and the time schedule and frequency for each inspection and test.
 7. Procedures for documenting quality control operations and inspection and testing with a copy of all forms and reports to be used for this purpose.
 8. Submittal Schedule stating the action required for testing and inspection with the name of the persons authorized to review the submittal.

1.4 RE Quality Monitoring:

- A.** The RE may perform such inspections and tests (monitoring) as necessary to determine or verify Subcontractor's compliance with Subcontract requirements. Subcontractor shall provide such facilities and assistance for the RE monitoring as may be reasonably required and shall ensure that all quality control records and places of Work are open and available to the RE. The RE's monitoring activities may consist of review, observation, inspection of Subcontractor personnel, material, equipment, processes, and test results including off-site inspections. The RE may perform quality audits of records and performance of Subcontractor or its lower tier subcontractor

and suppliers. The Subcontractor, lower tier subcontractor or supplier being audited shall be available during the audit as required by the RE. Testing or inspecting by the RE or FAA does not relieve the Subcontractor or its subcontractors from performing Work according to Subcontract requirements.

- B.** The RE will notify Subcontractor of any detected non-compliance with the requirements of this Section or other technical specification sections. Such notice, when delivered to Subcontractor at the Work site, shall be deemed sufficient for the purpose of notification. Subcontractor shall take immediate corrective action after receipt of a non-compliance notice and maintain a detailed record of every non-compliance and corrective action taken. The Subcontractor shall make no part of time lost due to non-compliance and/or stop orders the subject of a request for extension of time or compensation. Cost incurred by the RE or FAA to correct defective work will be deducted from the total amount due the Subcontractor.

PART 2 - PRODUCTS

[NOT USED]

PART 3 - EXECUTION

3.1 **QCP Reports:** Subcontractor shall provide forms to be used in conjunction with QCP reporting. A copy of all forms shall be included with the QCP. The following requirements are listed for specific reports:

1. **Testing Log.** As tests are performed, the QC Representative shall record dates testing was conducted, when results were forwarded to the RE, remarks, and acknowledgement that an accredited or approved testing laboratory was used. Forward a copy of the updated Testing Log on the last day of each month to the RE.
2. **Deficiency Log.** The QC Representative shall maintain a list of work that does not comply with the Subcontract, identifying the item to be reworked, the date the item was originally discovered, the date by which the item will be corrected, and the date the item was corrected. There is no requirement to report a rework item that is corrected the same day it is discovered. Provide a copy of the deficiency log to the RE weekly.
3. **Test Reports.** Subcontractor shall be responsible for establishing a system that will record all tests results. Information on test designation, location, date of test, specification requirements, results and retest results, causes for rejection and recommended remedial actions shall be documented. A copy of test results shall be sent directly from the agency performing the testing services to the RE. A copy of any failing report shall be sent immediately. All test reports provided by a testing agency must be reviewed and signed by a professional engineer registered in the jurisdiction where the work is being performed.
4. **Record Drawings.** The QC Representative shall ensure the Record Drawings required by the Subcontract are scalable, kept current on a daily basis, and marked to show deviations from the Contract drawings. Ensure each deviation has been identified with appropriate modifying documentation. The QC Representative shall initial each deviation and each revision. Upon completion of work, the QC Representative shall furnish a certificate attesting to the accuracy of the Record Drawings prior to submission to the RE.

3.2 **Daily Construction Reports:** The RE will keep a daily log of events that occur. The RE will review on a daily bases any problem area's that need to be resolved. At a minimum daily construction reports shall include the following information:

1. List of subcontractors at the site.
2. List of separate contractors at the site.
3. Approximate count of personnel at the site.
4. High and low temperatures, general weather conditions.
5. Accidents.
6. Meetings and significant decisions.

7. Unusual events.
8. Stoppages, delays, shortages, losses.
9. Meter readings and similar recordings.
10. Emergency procedures.
11. Orders and requests of governing authorities.
12. Change Orders received, implemented.
13. Services connected, disconnected.
14. Equipment or system tests and start-ups.
15. Partial Completions/Occupancies.
16. Substantial Completions authorized.
17. Number of days used in the Subcontract period to date.

- 3.3 Inspections and Testing Laboratory:** All inspections and testing on and off Site required by the Subcontract shall be performed as specified in individual specification sections by a certified independent firm employed by the Subcontractor at its expense. Inspecting, testing, and source quality control may occur on or off the Site. Submit qualifications and certifications of the independent inspections and testing firm for approval. Submit testing reports by the independent firm to the RE indicating observations and results of tests and indicating compliance or noncompliance with Contract Documents. Furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested. Any retesting required because of nonconformance to specified requirements shall be performed by the same independent firm at Subcontractor's expense.

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES

PART 1- GENERAL

1.1 **Section Includes:** This section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

1.2 **Related Sections:**
Section 01110 Summary of Work
Section 01450 Quality Control.

1.3 **Temporary Utilities and Support Facilities:**

A. **Temporary utilities required include but are not limited to:**

1. Water service and distribution.
2. Electric power and light.
3. Telephone service.
4. Storm Drain and Sanitary Sewer

B. **Temporary construction and support facilities required include but are not limited to:**

1. Temporary heat/air conditioning.
2. Storage sheds.
3. Temporary toilets and sanitation.
4. Sanitary facilities, including drinking water.
5. Temporary roads.
6. Temporary enclosures.
7. Temporary Project identification signs and bulletin boards.
8. Waste disposal services.
9. Construction aids and miscellaneous services and facilities.

C. **Security and protection facilities required include but are not limited to:**

1. Temporary fire protection.
2. Barricades, warning signs, lights.
3. Sidewalk bridge or enclosure fence for the site.

1.4 **RE Responsibilities:**

- A. RE shall make all reasonable required amounts of utilities available to the Subcontractor from existing outlets and supplies to the extent allowed by the Government. Unless otherwise provided in the Subcontract, the amount of each utility service consumed shall be charged to or paid for by the Subcontractor at prevailing rates charged to the Government or at reasonable rates determined by the RE. The Subcontractor shall carefully conserve any utilities furnished without charge.
- B. The Subcontractor, at its expense and in a workmanlike manner satisfactory to the Contractor shall install and maintain all necessary temporary connections and distribution lines and all meters required to measure the amount of each utility used. Prior to final acceptance of the work by the RE, the Subcontractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

1.5 Subcontractor Responsibilities:

- A. The Subcontractor shall confine all operations (including storage of materials) to areas set out in the Subcontract or otherwise authorized or approved by the RE.
- B. Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Subcontractor only with the approval of the RE, and shall be built with labor and materials furnished by the Subcontractor without expense to the RE. The temporary buildings and utilities shall remain the property of the Subcontractor and shall be removed by the Subcontractor at its expense upon completion of the Work. With the written consent of the SA, the buildings and utilities may be abandoned and need not be removed.
- C. The Subcontractor shall use only established roadways, or when authorized by the RE, temporary roadways that may be constructed by the Subcontractor at the Subcontractor expense. When materials are transported in prosecuting the Work, vehicles shall not be loaded beyond the loading capacity of the vehicle or as prescribed by any laws or regulation. When it becomes necessary to cross curbs or sidewalks, the Subcontractor shall protect them from damage; and shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

1.5 Temporary Utility Installation:

- A. The Subcontractor shall provide, maintain, and remove temporary electrical power, drinking and project water, and sanitary facilities as necessary for the proper and expeditious execution of work. If these facilities are not available on-site for use by the Subcontractor, then these facilities must be installed and maintained to comply with all federal, state, and local regulations governing such installations.
- B. Locations of such facilities will be approved by the RE.
- C. Subcontractor shall provide and pay for all temporary services and facilities as specified herein and as necessary for the proper and expeditious execution of the Work.
- D. Subcontractor shall make, or have made, all connections to existing services and sources of supply as necessary and/or indicated and pay all charges for same.
- E. Subcontractor shall provide all labor, materials, equipment and appurtenances necessary for the complete installation, operation and maintenance of all temporary service systems and facilities.
- F. All Work under this Section shall comply with applicable laws, rules, regulations, codes, ordinances and orders of all federal, state and local authorities having jurisdiction for the safety of persons, materials, and property.
- G. Subcontractor shall remove all such temporary installations and connections when no longer necessary for the project work.

1.7 Temporary Water: Subcontractor shall make arrangements to transport all necessary water for construction and drinking purposes in accordance with CFR 29 Part 1926, Subpart D.

1.8 Temporary Toilets and Sanitation: Subcontractor shall provide ample and suitable on-site sanitary conveniences with proper enclosures and hand washing facilities in accordance with CFR Part 1926, Subpart D for the use of the workers employed on the Work. Temporary toilets shall be properly maintained and serviced on a regular basis. Secure temporary toilets to prevent possible overturning.

1.9 Temporary Electric Lighting and Power

- A. Subcontractor shall provide and maintain a temporary lighting and power system in accordance with CFR 29 Part 1926 Subpart K for construction and inspection purposes.
- B. Subcontractor shall make all necessary arrangements for temporary electrical services with the local power company to provide and pay for all temporary work or, at Subcontractor's option, provide an approved temporary engine generator at the project site for construction support.
- C. Subcontractor shall not be permitted to use FAA furnished electrical service for installation of the work specified.

1.10 Temporary Heat:

- A. Provide heating devices and heat as needed to maintain specified conditions for construction operations.
- B. Maintain minimum 50 degree F ambient temperature in enclosed areas where construction is in progress.

1.11 Temporary On-Site Communications: The Subcontractor may provide on-site communications with hand-held radios. Coordinate with the RE and verify frequencies used do not interfere with local operations.

1.11 Temporary Access:

- A. The Subcontractor shall provide, maintain, and remove temporary roads necessary for access to the Worksites. These access roads shall be obliterated at the conclusion of the work and the areas shall be protected against erosion and shall be reseeded.
- B. Work shall be done in accordance with the Project Specifications and drawings.
- C. The Subcontractor shall take all precautions necessary to protect the existing facilities, equipment, buildings, vegetation, etc., during construction. Any areas damaged shall be repaired or replaced at no additional cost to Owner.
- D. All repairs shall match the original finish and be made utilizing materials equal in quality to the existing.
- E. Repairs shall be approved by the RE on site representative and Airport Authority.
- F. No separate payment will be made for temporary access.

1.13 Barricades, Warning Signs, and Hazard Markings:

- A. Furnish, erect and maintain all barricades, warning signs and markings for hazards to protect the Work.
- B. When used during peak periods of darkness, such barricades, warning signs and hazard markings shall be suitable illuminated (open flame type lights are not permitted).
- C. Once erected, maintain barricades, warning signs and markings for hazards until their dismantling is directed by the RE.

1.14 Temporary Construction Support Facilities:

- A. Provide the RE in accordance with this Section. Maintain temporary construction and support facilities until there is no need for them or at project completion. Remove all temporary facilities as directed by the RE.

- B. Provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.
- C. Temporary HVAC. The Subcontractor shall provide and be responsible for all temporary heat and ventilation. Provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy. Where natural ventilation of work in progress is not sufficient for proper workmanship, provide power ventilators in conjunction with openings in work. Provide and operate either exhaust or supply fans/blowers, or both, sufficient to ventilate work adequately.
- D. Heating Facilities. Except where use of the permanent system is authorized, provide vented self-contained LP gas or fuel oil heaters with individual space thermostatic control. Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited.
- E. Temporary Buildings. All temporary buildings provided by the Subcontractor shall be weather and watertight, and shall be maintained in a neat orderly appearance for the duration of the work, and shall be provided with raised wood floors, solid-sheathed composition roofs, adequately screened windows for light and ventilation and substantial wood doors with provisions for locking.
- F. In addition, the following equipment and furniture meeting the approval of the RE shall be furnished:
1. 1 desks and chair
 2. 1 file cabinet, letter size, with independent lock
 3. 1 chair
 4. 1 fax machine to use
 5. 1 carbon dioxide fire extinguisher (10lb. Capacity)
 6. 1 water cooler/dispenser
 7. 1 telephone with local exchange
 8. 1 plan table
 9. 1 trash can
- G. The Subcontractor shall make arrangements for and pay for the following utilities:
1. Temporary electric power and light.
 2. Telephone service.
- H. All utilities shall be functioning within 15 days of the date established for commencement of the work. The Subcontractor shall arrange for the RE to inspect and test each temporary utility before use. Coordinate with the RE requirements for certifications and permits. The Subcontractor shall engage the appropriate utility owner to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendation. All work associated with utilities owned by the FAA shall be performed by the Subcontractor as approved by the FAA.
- I. This item shall be counted as one lump sum for provision of a field office in accordance with this specification. Payment for providing the field office fully equipped as specified shall be made at the contract lump sum price. The Contractor shall make payment for all long distance phone calls made by its employees and subcontractors.

PART 2 - PRODUCTS [NOT USED]

PART 3 - EXECUTION [NOT USED]

END OF SECTION

SECTION 01600
MATERIALS AND EQUIPMENT

PART 1- GENERAL

- 1.1 Section Includes:** This section covers Subcontractor's requirements regarding materials and equipment that are incorporated into the Work.
- 1.2 Related Sections:**
- | | |
|--------------------|--|
| General Conditions | Article 2, Subcontractor Responsibilities and Article 7, Quality Assurance |
| Section 01110 | Summary |
| Section 01450 | Quality Control |
- Other Specification Sections as may apply to this section.
- 1.3 Materials and Equipment Incorporated into Work:**
- A.** Material and equipment incorporated into the Work shall conform to applicable specifications and standards and shall comply with size, make, type and quality specified, or as specifically approved in writing by the RE. Manufactured and fabricated products shall be designed, fabricated and assembled in accordance with the best and current engineering and shop practices. Like parts of duplicate units shall be manufactured to standard sizes and gauges and shall be interchangeable. Two or more items of the same kind shall be identical and manufactured by the same manufacturer.
- B.** Products shall be suitable for service conditions. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing. Do not use material or equipment for any purpose other than for which it is designed or specified. Furnish and install products specified. Other makes or brands may be used as outlined under options and conditions for substitution stated in this section.
- 1.4 Manufacturer's Instructions:**
- A.** When Contract Documents require that installation of Work shall comply with manufacturer's printed instructions, copies of such instructions shall be distributed to parties involved in the installation including the RE. The Subcontractor shall maintain one set of complete instructions at the Worksite during installation and until completion.
- B.** Products shall be handled, installed, connected, cleaned and conditioned in strict accordance with such instructions and in conformity with specified requirements. If job conditions or specified requirements conflict with manufacturer's instructions, the Subcontractor shall consult with the RE for further instructions. All work shall be performed in accordance with manufacturer's instructions. No preparatory step or installation procedure shall be omitted unless specifically modified or exempted by contract documents.
- 1.5 Transportation and Handling:**
- A.** Products shall be delivered in undamaged condition, in manufacturer's original containers or packing, with identifying labels intact and legible. Shipments shall be inspected to ensure compliance with requirements of the Contract Documents and approved submittals. Ensure that products are properly protected and undamaged immediately on delivery. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packing.

- B. Delivery of Subcontractor-Furnished Materials. The Subcontractor shall have personnel at the project site to receive all material being shipped by delivery vehicles. RE or FAA personnel are not responsible for signing off on deliveries of Subcontractor-Furnished Material. Delivery of Subcontractor-furnished material shall not be accepted by any Federal Government personnel.

1.6 **Storage:** The Subcontractor is responsible for arranging local storage areas for Government and Subcontractor Furnished Materials. Storage areas on facility property must be coordinated through the Daytona Beach Airport. Products shall be stored in accordance with manufacturer's instructions, with seals and labels intact and legible. Products subject to damage by the elements shall be stored in weather-tight enclosures. Temperature and humidity shall be maintained within the ranges required by the manufacturer's instructions. Fabricated products shall be stored above the ground, on blocking or skids to prevent soiling or staining. Products that are subject to deterioration shall be covered with impervious sheet coverings and adequate ventilation shall be provided to avoid condensation. Loose granular materials shall be stored in a well-drained area on solid surfaces to prevent mixing with foreign matter.

1.7 **Proprietary Names:** Whenever proprietary names are used in this specification for material or equipment, such names shall be construed as a standard to establish quality and accurately define the material or equipment. Another make or item may be approved provided it is equal or better than the specified manufacturer. All materials and equipment that is Subcontractor furnished material shall meet or exceed the specified salient characteristics.

1.8 **Substitutions:**

- A. A separate request for each substitution shall be submitted. Each request shall be supported with complete data substantiating compliance of proposed substitution with the requirements stated in the Contract documents. Each request shall include product identification, manufacturer's literature including address, product description, reference standards and performance, and test data. Samples shall be submitted as applicable.
- B. Substitution Information. An itemized comparison of the proposed substitution with the product specified shall be included. The following information shall also be included: data relating to changes in the construction schedule; list of changes required in other work or products; and accurate cost data.
- C. Substitution Conditions. Substitute products shall not be ordered or installed without written acceptance from the RE. In making a formal request for substitution, the Subcontractor represents that it has investigated the proposed product and has determined that it is equal to or superior in all respects to that specified; that they will provide same warranties or bonds for substitutions as for product specified, that they will coordinate installation of accepted substitution into work to be complete in all respects, that they waive claims for additional costs caused by substitution that may subsequently become apparent, and that cost data is complete and includes related costs under this Subcontract.

1.9 **Material Safety Data Sheets:**

- A. The Subcontractor shall submit Material Safety Data Sheets (MSDS), Department of Labor Form OSHA-174, as prescribed in Federal Standard No. 313, latest edition, for hazardous material five (5) days before delivery of the material, whether or not listed in Appendix A of the Standard. This obligation applies to all materials delivered under this contract which will involve exposure to hazardous materials or items containing these materials. "Hazardous Materials", as used in this paragraph, is as defined in Federal Standard No. 313, latest edition.
- B. MSDS Submittal. The RE, during construction, will routinely check products utilized on site by the Subcontractor to ensure MSDSs have been submitted and approved, in accordance with Section 01330, Submittal Procedures. If the Subcontractor does not submit the required information as described herein,

the RE, at its option, will have a complete project survey performed by a qualified testing firm prior to acceptance of the project from the Subcontractor. The Subcontractor shall bear the cost of all surveys and any subsequent removal/replacement of asbestos-containing materials.

1.10 Asbestos-Free and Lead-Free Materials:

The Subcontractor shall provide to the SA a signed statement stating that to the best of its knowledge, no asbestos-containing or lead-containing materials were used during the construction of this project. If the RE suspects the presence of asbestos, the RE will sample the suspect material to verify that no asbestos-containing material was utilized. If asbestos-containing material is subsequently found during sampling of the materials, the Subcontractor shall remove and replace the product or material at its expense. In addition, the Subcontractor shall incur the costs of the original testing and/or any retesting that may be necessary.

END OF SECTION

SECTION 01710
CONSTRUCTION LAYOUT

PART 1 – GENERAL

- 1.1 **Section Includes:** This section covers the requirements of Subcontractor to provide construction layout resources for all required horizontal and vertical control work related to the Work.
- 1.2 **Related Sections:**
- | | |
|--------------------|---|
| General Conditions | Article 2, Subcontractor Responsibilities |
| Section 01110 | Summary of Work |
| Section 01450 | Quality Control |
- Other specification sections apply to this section.
- 1.3 **Types of Layout:** The Subcontractor shall furnish surveying resources to accomplish the work listed below.
1. Layout and staking of the facilities.
 2. Layout of all access roads, plots and miscellaneous foundations in accordance with the Contract drawings.
 3. Survey all cable runs, junctions, and turns.
- 1.4 **Materials, Equipment, and Personnel:**
- A. All materials used for surveying shall be obtained from a dealer regularly engaged in the sale or rental of surveying supplies. Contractor-fabricated hubs and general construction nails shall not be used for surveying purposes.
 - B. All surveying equipment that is used must be in proper working condition. The date of the last calibration shall be provided to the RE upon request. If a surveying tape is used, it shall be free of kinks and tears.
 - C. The surveying personnel used by the Subcontractor shall be experienced and familiar with the type of equipment being used. The Subcontractor shall provide resumes of the survey crew party chief and instrument operator if requested by the RE. Failure to furnish competent survey personnel may result in the SubContractor duplicating the required survey work until acceptable to the RE.
- 1.5 **Examination:** The Contract Documents are based upon information collected by the RE from a number of different sources. Any record furnished is for information only, and does not represent all conditions that may exist. Other construction, of which no records are available, may be encountered. The Subcontractor and each subcontractor shall field-verify existing dimensions. The existence and location of underground and other utilities and construction indicated as existing is not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.

PART 2 - PRODUCTS

[NOT USED]

PART 3 - EXECUTION

3.1 **Conducting Survey Work:**

- A. The Subcontractor shall layout its work from established airport or facility base lines and benchmarks and/or as indicated on the drawings. Subcontractor shall be responsible for all measurements in connection with the layout. The Subcontractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to layout any part of the Work. The

Subcontractor shall be responsible for the execution of the Work to the lines and grades specified in the Contract Documents or as indicated by the RE. The RE reserves the right to determine when a reference hub has been displaced.

- B. The Subcontractor shall establish and maintain a minimum of two permanent benchmarks on the Worksite, referenced to data established by survey control points, and record benchmark locations with horizontal and vertical data on project Record Documents.
- C. The Subcontractor shall be responsible for maintaining and preserving all stakes and other marks established by the RE until authorized to remove them. If such marks are destroyed by the Subcontractor or through its negligence before removal is authorized, the FAA may replace them and deduct the expense of the replacement from any amounts due or to become due to the Subcontractor.
- D. The Subcontractor shall establish the horizontal control for the system layout, access roads, facility plot, foundations, and light stations. All cable runs shall be marked at a minimum of 200 foot stations, at all turns, and at all junctions or hand holes. The distance from the centerline of any adjacent runway to the cable run shall be determined and recorded on the Record Drawings if such dimensioning is shown on the Contract Drawings.
- E. Prior to foundation installation, the Subcontractor shall take elevation readings for the existing grade. Following installation of all light stations, the Subcontractor shall take elevation readings of the tops of concrete foundations and light elevations, at all light stations. Subcontractor shall record all elevation readings on the Record Drawings.

- 3.2 **Quality Control:** The RE reserves the right to verify all survey work. The Subcontractor shall leave all survey hubs in place until work has been verified by the RE. If deemed necessary, the Subcontractor shall supply one laborer to assist the RE in verifying all survey work.

END OF SECTION

SECTION 01720
WORK PLACE SAFETY AND HEALTH

PART 1 - GENERAL

- 1.1 **Section Includes:** This section identifies Subcontractor requirements for work place safety and health as generally required by local, state, and Federal regulations.
- 1.2 **Related Sections:**
- | | |
|--|---|
| General Conditions | Article 2, Subcontractor Responsibilities |
| Section 01730 | OSHA Safety Requirements |
| Section 01740 | Runway Safety Requirements. |
| Supplementary Conditions sections 00840, Safety Requirements | |
- 1.3 **Subcontractor Responsibility:** It shall be the responsibility of the Subcontractor to comply with safety, health, and emergency response provisions of this Subcontract. The provisions of this section represent minimum requirements and shall not supersede additional requirements stated within the Subcontract or local, state, and Federal regulations.
- 1.4 **Personal Protection:** The Subcontractor shall provide all on-site personnel with appropriate personal safety equipment and protective clothing, and shall ensure that all safety equipment and protective clothing are kept clean and well maintained. Hard hats shall be worn at all times from start to completion of the Subcontract unless a waiver is obtained in writing from the RE. In addition, the following items shall be provided to and utilized by all personnel:
1. Work clothing as dictated by the weather.
 2. Footwear appropriate for the job which may include steel-toe/shank work safety boots.
 3. Additional items shall be provided contingent on the type of hazard encountered and the accepted industry standard for handling the specific type of hazard.
- 1.5 **First Aid and Emergency Response Equipment:** The Subcontractor shall provide for appropriate emergency equipment including an industrial-type first aid kit, a 2A:20B:C-rated fire extinguisher, spill control equipment, and supplies of sufficient quantity to handle potential accidents/incidents related to the nature of the work being accomplished. A listing of emergency phone numbers and points of contact for fire, hospital, police, ambulance, and other appropriate emergency agencies shall be readily available.
- 1.6 **Notification of Spills and Discharges:**
- A. Subcontractor shall notify proper local authorities immediately in the event of a spill or discharge of potentially harmful or hazardous materials. Following notification of the local authorities, the Subcontractor shall notify the RE, and Subcontract Administrator immediately. If the spill or discharge is reportable under local, state or Federal regulations, and/or human health or the environment is threatened, the Subcontractor shall notify the National Response Center at 1-800-424-8802 and the state's Department of Natural Resources where the spill or discharge occurred.
 - B. Decontamination procedures may be required after clean-up to eliminate traces of the substance spill or reduce it to an acceptable level, as determined by the RE. Complete clean-up may require removal and disposal of contaminated soils. Personnel and equipment decontamination shall occur as specified in this section. All contaminated materials, including solvents, cloth, soil, and wood, that cannot be decontaminated must be properly containerized, labeled, and properly disposed of as soon as possible.
 - C. Personnel and equipment that have come into contact with contaminated materials shall be decontaminated. A detergent that has been shown to be successful and effective for removing the hazardous material shall be used as the decontamination solution. Following washing, items shall be rinsed with clean water.

- 1.7 **Project-Generated Wastes:** The Subcontractor shall properly dispose of project-generated wastes that are or may have become contaminated (i.e., PCBs or asbestos). Such wastes include, but are not be limited to, disposable clothing, decontamination solvents, and decontamination wash waters.
- 1.8 **Confined Space**
- A. Definition. A confined space shall be defined as a space, which, by design, has limited openings for entry and exit, unfavorable natural ventilation that could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy. Confined spaces (as defined by OSHA) include, but are not limited to, storage tanks, compartments of ships, process vessels, pits, silos, vats, degreasers, reaction vessels, boilers, ventilation and exhaust ducts, sewers, tunnels, underground utility vaults, and pipelines.
- B. In general, FAA confined spaces include vaults, lift stations, crawl spaces, small engine generator rooms, sewers, sumps, chillers, pits, boilers, tunnels, manholes, cooling towers, tanks, and watershed.
- C. Applicable Documents. The following publications of the issue in effect on the date of the solicitation form a part of this specification and are applicable to the extent specified herein.
1. American National Standards Institute (ANSI)
2117.1 Safety Requirement for Confined Space
 2. FAA Orders
CE 1053.2 Central Region Confined Space Program
CE 1050.4 Environment and Safety Program
 3. OSHA Standards
29 CFR 1910.268 Telecommunications
29 CFR 1910.269 Electric Power Transmission, Generation, and Distribution
29 CFR 1910.46 Permit-Required Confined Spaces
29 CFR 1926.956 Underground Lines
- D. Requirements. Prior to any admittance into a confined space as defined in this Section, the Subcontractor shall perform a hazard evaluation. The hazard evaluation shall include testing the atmosphere for oxygen content, the presence of toxic gases, and the presence of explosive or flammable gases.
- 1.9 **Work Area:** The project work area is surrounded by swampy areas and it is infected by "Dear Flies" and "Fire Ants". The construction crew shall use adequate measures to protect themselves

PART 2 - PRODUCTS

[NOT USED]

PART 3 - EXECUTION

Accident Reporting:

In the event of an accident or incident, the Subcontractor shall immediately notify the RE in accordance with the Subcontractor's SSSP. Within 2 working days of any reportable accident/incident or as otherwise set out within the SSSP if an earlier time is specified, the Subcontractor shall complete and submit to the RE a written Accident Report. This report shall include the following information:

1. Name, telephone, and location of entity.
2. Project name and description.
3. Name and title of person reporting.
4. Location of accident/incident.
5. Brief summary of the accident/incident giving pertinent details including type of operation ongoing at the time of the accident/incident.
6. Cause of the accident/incident, if known.
7. Casualties (fatalities, disabling injuries).

8. Details of any existing hazard (chemical, contamination, work place safety).
9. Estimated property damage.
10. Nature of damage, effect on Subcontract schedule.
11. Action taken by Subcontractor to ensure safety and security.
12. Witness information/FAA personnel contacted.

3.2 Spills: In the event of a spill, the Subcontractor shall take immediate action to control and contain the spill. This will include, at a minimum, the following actions:

1. Keep unnecessary people away, isolate hazardous area, and deny entry.
2. Do not allow anyone to touch spilled material.
3. Stay upwind; keep out of low areas.
4. Keep combustibles away from the spilled material
5. Use water spray or foam to reduce vapor or dust generation, as needed
6. Take samples for analysis to determine that clean-up is adequate. Properly trained personnel should be involved in this action.
7. Take other appropriate actions as needed.
8. For solid spills, immediately remove and place contaminated materials into staging piles and cover; identify the pile as contaminated; test the material for treatability; dispose of the contaminate off-site at an approved disposal facility.
9. For liquid spills, immediately absorb with sand, clean fill, or other absorbent/spill mixture.

3.3 Permit-Required Confined-Space Program:

- A. Subcontractor shall be required to evaluate all potential confined spaces as contained in this project and shall submit a Permit Required Confined Space (PRCS) Program to the RE for review. The RE considers all confined spaces as permit required and therefore the Subcontractor shall be required to submit a PRCS Program for review. The PRCS Program shall outline all potential confined spaces and shall be made in accordance with the applicable OSHA Standards. The PRCS Program shall be sent to the RE and shall be in accordance with the submittal sections of the Subcontract.
- B. Permits are required to enter all FAA confined spaces. The Subcontractor shall prepare an application for permit that defines all conditions that must be met in order to ensure safety of personnel. Permits must be filled out, submitted, reviewed, and posted prior to any personnel entering the confined space. Subcontractor shall be required to permit all confined spaces. Prior to preparing the permit, the Subcontractor shall obtain permission to permit the space from the RE. The RE will coordinate all applications with the FAA Systems Management Office (SMO) Confined Space Coordinator. See applicable OSHA Standards for additional information. At no time will the Subcontractor enter an FAA-owned confined space without first obtaining permission from the FAA through the RE.
- C. Copies of all confined space permits shall be given to the RE and the SMO Confined Space Coordinator.
- D. Subcontractor shall be required to provide all test equipment, personal protective equipment and materials as required for the testing, permitting, monitoring and entering of confined spaces. All equipment must be calibrated within the last 6 months and shall be authorized for its intended use. Subcontractor shall submit test equipment most recent calibration date to RE and the SMO Confined Space Coordinator on all test equipment used for confined spaces as part of its PRCS.
- E. Subcontractor shall be required to provide one set of all test equipment, personnel protective equipment and materials required for the RE. All items shall be given to the RE at the beginning of the project. They will be returned when the project is complete. Subcontractor shall also be required to include its PRCS Program adequate protection for the RE. This shall include all ventilation, testing, monitoring, rescue equipment, ladders, and harnesses as required. All protection and testing for the RE shall be as required for all Subcontractor employees.
- F. All manholes and handholes greater than 3'-6" in depth shall be considered as permit-required confined spaces. Subcontractor shall adhere to all requirements as outlined herein.

END OF SECTION

SECTION 01730
OSHA SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 Section Includes: This section identifies some of the requirements of the OSHA Construction Standard.

1.2 Related Sections

General Conditions	Article 2, Subcontractor Responsibilities
Section 01720	Work Place Safety and Health
Section 01740	Runway Safety Requirements
Supplementary Conditions sections 00840,	Safety Requirements

1.3 Subcontractor Responsibility:

- A. General Safety Provisions. The Subcontractor shall bear full responsibility to provide safe working conditions for its employees and subcontractors. The Subcontractor shall not permit any employee or subcontractor to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to the health and safety of the employee.
- B. Accident Prevention. The Subcontractor shall bear the responsibility of maintaining an accident prevention program such that frequent and regular inspections of the job site, materials and equipment are made by a competent person designated by the employer.
- C. Use of Equipment. The Subcontractor shall not permit the use of any machinery, tool, material, or equipment that is not in compliance with OSHA regulations. The employer shall permit only those employees qualified by training and/or experience to operate equipment and machinery.

1.4 Contractor Responsibility:

- A. The RE shall not be held responsible for safety inspections to assure Subcontractor conformance with the OSHA safety regulations. The RE, however, reserves the right to notify the Subcontractor of any deficiencies regarding worker safety.
- B. The RE will evaluate the Subcontractor on its safety performance, including that of its subcontractors. The number and severity of safety and security violations will be considered in this evaluation. Subcontractor safety violations are cause for termination for default, may result in notification of the Subcontractor's bonding company, and will affect the Subcontractor's opportunity to propose on future work. Failure to correct such deficiencies will result in the RE reporting such deficiencies to the FAA and may impact the Subcontractor's ability to work on future FAA contracts.

1.5 OSHA Regulations:

- A. The Subcontractor shall comply with the latest Occupational Safety and Health Administration regulations (CFR 29 Part 1926) regarding safety in the work area.
- B. The Subcontractor shall be responsible for obtaining copies of non-FAA referenced documents without additional cost to the FAA. If Subcontractor requests, a copy of FAA directives may be obtained by contacting the Subcontract Administrator.
- C. The Subcontractor is not relieved from adhering to other OSHA requirements not listed herein. The Subcontractor shall consult the latest referenced OSHA documents for safety regulations.

D. Documents :

1. OSHA Documents:
CFR 29 Part 1926 Safety and Health Regulations for Construction
CFR 29 Part 1910 General Industry Standards Applicable to Construction Industry
2. FAA Documents:
FAA Order 3900.49 Control of Hazardous Energy During Maintenance, Servicing and Repair

PART 2 - PRODUCTS [NOT USED]

PART 3 - EXECUTION

3.1 CFR 29 Part 1926 -- Safety and Health Regulations for Construction: This section contains a partial listing of the referenced OSHA standards. The Subcontractor is responsible for adhering to all applicable regulations including those not specifically referenced herein.

1. Subpart D (Occupational Health and Environmental Controls). Subcontractor shall furnish adequate supply of potable water in containers clearly marked as potable water. Containers containing non-potable water shall be clearly marked. Subcontractor shall furnish toilet facilities based on the number of employees present on the job-site. A minimum of 1 facility is required for less than 20 employees. See CFR 29 Part 1926 Subpart D for complete requirements.
2. Subpart E (Personal Protective Equipment). The Subcontractor shall provide adequate protection for the head, hearing, and eyes for all employees working in an area where hazards to the head, ear and eyes exist. See CFR 29 Part 1926 Subpart E for complete requirements.
3. Subpart I (Tools). All hand tools and power tools and similar equipment whether furnished by the Subcontractor or the employee shall be maintained and operated in a safe condition. Personal protection shall be used when applicable. The use of tools shall be limited to the intended use of said tools. See CFR 29 Part 1926 Subpart I for complete requirements.
4. Subpart K (Electrical). The Subcontractor shall furnish ground fault protection for all electrical equipment used on the jobsite. Extension cords shall be three wire ground in good shape. Installation of the facilities will require energizing numerous circuits. The Subcontractor shall protect against electrical shock by methods such as posting warning signs, supplying insulated gloves, locking out and tagging de-energized circuits, and other similar methods. See CFR 29 Part 1926 Subpart K for complete requirements.
5. Subpart P (Excavation/Trenching). Prior to commencing trenching or excavation, the Subcontractor shall ascertain that the area has been inspected for all utility lines and has been adequately marked. Trenches over four (4) feet in depth shall require either adequate bracing or approved slope or bench methods. All trenches and excavations shall be regularly check for stability. In the event of a rain shower, the Subcontractor shall suspend work activity within the trench or excavation until the stability of the trench or excavation is ascertained. See CFR 29 Part 1926 Subpart P and Division 2 of the Subcontract Specifications for complete requirements for additional requirements.

3.2 CFR 29 Part 1910 -- General Industry Standards Applicable to Construction Industry: This section contains a partial listing of the referenced OSHA standards. The Subcontractor is responsible for adhering to all applicable regulations including those not specifically referenced herein.

1. Section 1910.147. Subcontractor shall maintain a written hazardous energy control procedure in accordance with CFR 29 1910.147. The written procedure shall describe contractor's responsibilities regarding shift changes or personnel changes. A specific coordinated lockout/tagout procedure shall be recorded in writing and signed by the Subcontractor and Subcontract Administrator with copies to each party.
2. Section 1910.127. The Subcontractor shall develop and implement an Emergency Response and Contingency Plan in accordance with OSHA Standard 29 CFR 1910.120. In the event of an emergency associated with remedial action, the Subcontractor shall, without delay, take diligent action to remove or otherwise minimize the cause of the emergency; alert the RE; and institute whatever measures might be

necessary to prevent any repetition of the conditions of actions leading to, or resulting in, the emergency. Emergency contact names and telephone numbers shall be posted at all project phones and in site-support vehicles as well as included within the plan.

END OF SECTION

SECTION 01750
PROTECTION OF EXISTING CONDITIONS AND INSTALLED WORK

PART 1 - GENERAL

1.1 Section Includes: This section the basic care the Subcontractor shall use to prevent unnecessary damage to property in or near the Worksite during performance of the Work.

1.2 Related Sections:
General Conditions Article 2, Subcontractor Responsibilities
Section 01110 Summary of Work
Supplementary Conditions section 00820, Environmental Protection, and 00835, Special Project Procedures

1.3 Protection of Existing Vegetation, Structures, Equipment, and Facilities:

- A. The Subcontractor shall take all precautions necessary to protect the existing facilities, equipment, buildings, and vegetation during construction. Any areas damaged shall be repaired or replaced at no additional cost to owner. Repairs shall be approved by the RE. All repairs shall match the original finish and be made utilizing materials equal in quality to the existing.
- B. The Subcontractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Subcontractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during Subcontract performance, or by the careless operation of equipment, or by workmen, the Subcontractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the RE.
- C. The Subcontractor shall protect from damage all existing improvements and utilities at or near the Worksite and on adjacent property of a third party, the locations of which are made known to or should be known by the Subcontractor.
- D. The Subcontractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this Subcontract or failure to exercise reasonable care in performing the Work. If the Subcontractor fails or refuses to repair the damage promptly, the RE may have the necessary work performed and charge the cost to the Subcontractor

1.4 Property Protection:

- A. The Subcontractor shall construct and maintain such temporary fences, gates and other facilities as shall be necessary for preservation of crops, control of livestock, and protection of property. Before cutting a fence, the Subcontractor shall take necessary precautions to prevent the straying of livestock and may prevent the loss of tension in or damage to adjacent portions of the fence. The Subcontractor shall immediately replace all fencing and gates that it cuts, removes, damages, or destroys with new materials to the original standard, with the exception that undamaged gates shall be reused.
- B. The Subcontractor shall comply with the request of the property owner relative to leaving gates open or closed.

- C. The Subcontractor shall use all necessary precautions to avoid the destruction of surveying markers such as section corners, witness trees, property corners, mining claim markers, bench markers, triangulation stations, and the like. If any such marker must be destroyed, the Subcontractor shall first notify the agency responsible for the marker, as well as the RE, and assume all responsibility for replacing markers.
- D. Unnecessary damage is that which can be avoided through efficient and careful performance of the work in a careful manner, taking into account the land rights which have been secured. If the Subcontractor damages any property, the Subcontractor shall at once notify the RE and owner or custodian and may make or arrange to make prompt and full restitution.
- E. Maps and specifications provided by the RE may not give the location of all water supply, drainage, irrigation, and other underground facilities. Prior to entering a tract of land for subcontract purposes, the Subcontractor shall ascertain from the property owner or other reasonably available source the location of any irrigation system, domestic water system, source of water, and drainage system existing on the property, whether serving that property or other property. The Subcontractor shall report any findings to the RE. The Subcontractor shall avoid damaging or obstructing these facilities or polluting water supplies.
- F. The Subcontractor shall hold RE harmless from any and all suits, actions, and claims for damages, including environmental impairment, to property arising from any act or omission of the Subcontractor, its subcontractors, or any employee of the Subcontractor or subcontractors, in any way related to the Work or operations under this Subcontract.
- G. The Subcontractor shall indemnify and hold harmless the property owners or parties lawfully in possession against all claims or liabilities asserted by third parties, including all governmental agencies, resulting directly or indirectly from the Subcontractor's wrongful or negligent acts or omissions.
- H. The Subcontractor shall maintain all roads used by it, and upon completion of the job shall leave them in as good a condition as when first used. A road-grading machine, not a bulldozer, shall be used for maintenance and final grading. In no event shall the Subcontractor interfere with the property owner's use of roads existing prior to the Subcontractor's entry.

1.5 Protection of Installed Work:

- A. Protect installed Work. Provide special protection where required in the Specifications and drawings or under manufacturer's warranty.
- B. Provide temporary and removable protection for installed Products. Control activities in immediate Work area to prevent damage.
- C. Protect finished floors and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- D. Prohibit traffic or storage upon completed surfaces. Obtain protection instructions from the manufacturer if traffic or activity is necessary.

END OF SECTION

SECTION 01760
ORDERLY WORKSITE AND SITE CLEANUP

PART 1 - GENERAL

1.1 Section Includes: This section sets out the basic Subcontractor requirements for maintaining an orderly and clean Worksite.

1.2 Related Documents:

General Conditions	Article 7, Quality Assurance
Section 01110	Summary of Work
Section 01750	Protection of Existing Conditions and Installed Work
Supplementary Conditions section 00835	Special Project Procedures

1.3 Basic Requirements:

- A. The Worksite, including storage areas, shall be kept clean and orderly during progress of the Work. The Subcontractor shall be personally responsible for the storage of tools and materials. The Subcontractor shall and shall require each subcontractor engaged upon the work to bear full responsibility for cleaning up during and immediately upon completion of their work.
- B. The Subcontractor shall provide on-site containers for the collection of waste material, debris and rubbish and periodically remove as required or at the direction of the RE. Any spillage on access or haul routes shall be cleaned up immediately. All spoil, waste, or debris removed from the work site and not specified for reuse or identified as salvageable items, shall become the property of the Subcontractor and shall be disposed of off site in areas authorized by the applicable County, State and/or Local agencies and in accordance with current rules and regulations governing the disposal of such waste. Disposal fees and miscellaneous charges shall be paid by the Subcontractor.
- C. Unless specifically set forth in the Subcontract, burning is not permitted for the disposal of refuse and debris. All rubbish, waste, tools, equipment, and other apparatus caused by or used in the execution of the Work shall be removed. This shall in no way be construed to relieve the Subcontractor of its primary responsibility for maintaining the facilities and the site clean and free of debris, and leaving all work in a clean and proper condition acceptable to the RE.
- D. Immediately after unpacking, all packing material, case lumber, wrappings, or other rubbish, flammable or otherwise, shall be collected and removed from the building and the premises.
- E. Subcontractor shall prohibit material and rubbish from entering aircraft operations areas

PART 2 - PRODUCT [NOT USED]

PART 3 - EXECUTION

3.1 Progress Cleaning and Waste Removal:

- A. Remove all rubbish, waste, tools, equipment, and appurtenances used from the Worksite at the end of each day to maintain egress, safety, and sanitation.

- B. Remove debris and rubbish from closed or remote spaces before enclosing the space. Collect and remove waste materials, debris, and rubbish from site, and dispose of off-site.
 - C. Sweep and vacuum clean interior areas before start of surface finishing and continue cleaning daily to eliminate dust.
- 3.2 **Overall Cleaning:** Immediately before the final inspection, the entire exterior and interior of any building and the surrounding areas shall be thoroughly cleaned by the Subcontractor, including but not limited to the following:
- 1. All construction facilities, debris, and rubbish shall be removed from any building and the site.
 - 2. All finished surfaces within any building shall be swept, dusted, vacuumed, washed, or polished as required.
 - 3. All tools, scaffolding, temporary utility connections or buildings, belonging to the Subcontractor, or used under his/her direction, shall be removed from the site.
- 3.3 **Final Cleaning**
- A. Thoroughly clean entire Worksite and exterior and interior of any building.
 - B. Remove debris and rubbish from any building and the Worksite.
 - C. Finished surfaces within any building shall be swept, dusted, vacuumed, washed, or polished as required.
 - D. Remove all tools, scaffolding, temporary utility connections or buildings belonging to the Subcontractor or its lower tier subcontractors from the Site.
 - E. Reseed disturbed areas. Rake and restore all gravel surfaces.

END OF SECTION

SECTION 01770
CLOSEOUT PROCEDURES

PART 1- GENERAL

1.1 Section Includes: This section sets out the requirements for Subcontract closeout at completion of the Work.

1.2 Related Documents:

Section 01110	Summary of Work
Section 01600	Materials and Equipemnt
Section 01750	Protection of Existing Conditions and Installed Work
Section 01760	Orderly Worksite and Site Cleanup
Supplementary Conditions section 00835	Special Project Procedures
General Conditions, Article 4, Compensation and Payment, Article 7, Quality Assurance;	

1.3 Final Submittal requirements: Prior to final acceptance, the Subcontractor shall assemble all appropriate warranties, product information, certifications, equipment installation instructions, MSDS sheets, and the results of all tests.

1.4 Contractor Acceptance Inspection (CAI):

- A. The Subcontractor shall recommend to the RE the date to schedule the CAI. The Subcontractor shall notify the SA in writing seven days (or as otherwise agreed to) before an agreed upon CAI date.
- B. The Subcontractor shall have the superintendent present at the CAI. The RE shall conduct an inspection of the facility to verify all Subcontract conditions are met. Any additional required test results shall be submitted to the RE at this time. The RE reserves the right to have local FAA personnel conduct additional tests to verify that operational requirements are met. The FAA reserves the right to have airport personnel present to document any concerns regarding final condition of the Site.

1.5 Punch List: The RE shall furnish the Subcontractor with a list of discrepancies in the work, material, and equipment (punch list) that were noted during the CAI. Subcontractor shall correct all deficiencies, if any, detected during the CAI before final acceptance. Work showing evidence of substandard performance will not be accepted and shall be corrected by the Subcontractor at its expense.

1.6 Final Acceptance of Work:

- A. The Subcontractor shall correct discrepancies noted on the punch list prior to the final acceptance. The premises shall be thoroughly clean prior to final acceptance. Subcontractor shall schedule final inspection and notify in writing the RE seven days (or as otherwise agreed to) before the planned inspection date.
- B. Subcontractor shall have the superintendent present at the final inspection. The RE shall conduct the final inspection of the facility to verify all contract conditions are met.
- C. Upon acceptance by Contractor, Subcontractor may submit Final Application for Payment.

END OF SECTION